

**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NO. 45607**

I. INTRODUCTION

This Class II renewal permit is for the operation of a cotton gin facility owned and operated by Kansas Settlement Company. This is a stationary facility.

A. Company Information

1. Company Address: 8211 Kansas Settlement Road, Willcox, AZ 85643
2. Facility Address: 8211 Kansas Settlement Road, Willcox, AZ 85643

B. Background

This operating renewal permit is issued to Kansas Settlement Gin Co., the Permittee, for operation of its Cotton Ginning facility. This facility is a stationary source and is located at 8211 Kansas Settlement Road, Willcox, AZ 85643. This permit will supersede Class II Air Quality Permit #1001792

The facility is located in an attainment area for all pollutants.

C. Learning Sites

There are no learning sites within two miles of the facility.

II. FACILITY DESCRIPTION

A. Process Description

Raw cotton arrives at the ginning facility in module blocks, which yield approximately 12 bales. The process in the cotton gin is to clean, dry if needed and remove all foreign matter and seed from the lint. Raw cotton, seed and trash are transported through the ginning system pneumatically. The cleaning process is either a scrubbing action between spiked cylinders and grid racks, or a centrifugal action where the cotton goes around a saw type cylinder and the trash is slung out. Separation of the lint from the seed is done at the gin stand where the gin saw goes through a rib configuration with clearance that allows the lint to pass but not the seed. Drying of the cotton, if needed, is accomplished by the addition of hot air into the pneumatic flow of the cotton.

B. Air Pollution Control Equipment

Particulate emissions from the cotton processing equipment are controlled by the use of cyclones.

III. COMPLIANCE HISTORY

No air quality violations are associated with this facility at this time. The facility is in compliance and there are currently no outstanding air quality enforcement issues.

IV. EMISSIONS

The factors used to calculate particulate emissions from the ginning operations were taken from Table 9.7-1 of AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources. Factors used to calculate emissions from the natural gas burners were taken from Table 1.4-1 of the same reference.

The calculated potential to emit (PTE) particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns (PM₁₀) for this facility when operating 8,760 hours per year with pollution control cyclones in service, is less than 100 tons per year. The facility is therefore classified as a synthetic minor source.

V. APPLICABLE REGULATIONS

The applicable regulations listed in Table 3 below were identified by the Department. If necessary, the source is required to list any additional regulations that may be applicable.

Table 1: Verification of Applicable Regulations

Unit	Control Device	Rule	Verification
Cotton Gin Facility	Cyclones	<u>A.A.C.</u> R18-2-729	This standard is applicable to all Cotton Gins.
Mobile Sources	Water and other equivalent controls	<u>A.A.C.</u> R18-2-801 R18-2-802 R18-2-804	These regulations are applicable to all mobile sources
Fugitive Dust Sources	Water and other equivalent controls	<u>A.A.C.</u> R18-2-602 R18-2-604 R18-2-605 R18-2-606 R18-2-607 R18-2-614 R18-2-702	These standards are applicable to all fugitive dust sources.

Other Periodic Activities	Particulate Matter control, proper selection of approved paint materials, hazardous air pollutant control	<u>A.A.C.</u> <u>R18-2-702.B1</u> <u>R18-2-726</u> <u>R18-2-727</u> <u>R18-2-1101.A.8</u>	These standards are applicable to all periodic activities including abrasive blasting, use of paints and demolition/renovation of asbestos-containing buildings.
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V. PREVIOUS PERMITS AND CONDITIONS

A. Previous Permits

TABLE 2: Previous permits

Date of Permit Issuance	Permit Number	Application Basis
July 25, 2002	1001792	Operating permit

B. Previous Permit Conditions

TABLE 3: Previous permit conditions

Permit Condition	Determination				Remarks
	Delete	Keep	Revise	Streamline	
Attachment "A"			√		General Provisions – updated to reflect the most recent Attachment "A" language
Attachment "B" Section I			√		Facility wide Requirements– updated to reflect the most recent permitting format and language
Attachment "B" Section I D I E			√		Updated to reflect the most recent permitting format and language. The 5000 hours per year rolling 12-month basis was not needed because of updated PTE calculations.
Attachment "B" Section II			√		Cotton Gin – updated to reflect the most recent permitting format and language
Attachment "C"			√		The equipment list was updated to reflect equipment changes since the last permit was issued

VI. MONITORING REQUIREMENTS

A. Cotton Gin

The Permittee is required to perform monthly visual surveys of the emissions when the gin is in operation. If the survey indicates that emissions may be exceeding the opacity limit, the permit requires the Permittee to perform a 6-minute EPA Reference Method 9 observation. The Permittee must report all 6-minute periods during which the visible emissions exceed the opacity standard.

B. Fugitive Dust Sources

The Permittee is required to perform monthly visual surveys of the emissions when the gin is in operation. If the survey indicates that emissions may be exceeding the opacity limit, the permit requires the Permittee to perform a 6-minute EPA Reference Method 9 observation. The Permittee must report all 6-minute periods during which the visible emissions exceed the opacity standard.

VII. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
CO	carbon monoxide
EPA	Environmental Protection Agency
hr	hour
lb	pound
lb/hr	pound(s) per hour
NOx	nitrogen oxides
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns
PTE	potential-to-emit
SOx	sulfur dioxide
tpy	ton(s) per year
VOC	volatile organic compounds